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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,998	03/23/2001	Hirofumi Taketsu	2204-002012	1204

7590

08/12/2002

Russell D Orkin
700 Koppers Building
436 Seventh Avenue
Pittsburgh, PA 15219-1818

EXAMINER

BLOUNT, STEVEN

ART UNIT

PAPER NUMBER

3726

DATE MAILED: 08/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

69/187,998

Applicant(s)

Taketsu et al

Examiner

Blount

Group Art Unit

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—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 7/5/02
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-10 is/are pending in the application.
- Of the above claim(s) 8 is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-7 and 9-10 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 4 ☐ Interview Summary, PTO-413
- ☒ Notice of Reference(s) Cited, PTO-892 ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948 ☐ Other _____

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DETAILED ACTION

1. Applicant's election with traverse of claims 1-7 and 9-10 in Paper No. 6 is acknowledged. The traversal is on the ground(s) that the search for the two inventions is coextensive, and that the method of making the fuel tank requires the use of the aluminum coated steel sheet. This is not found persuasive because the searches are in fact widely divergent (class 29, method of manufacturing as to the method, and class 427, coating, as to the product). Further, as stated in the restriction requirement, the invention of the product (group I in the restriction requirement) does not require a great number of features that the method of making the fuel tank does, as was noted in the restriction requirement.

The requirement is still deemed proper with regard to claim 8, and is therefore made FINAL. However, with regard to claims 9 and 10, the examiner acknowledges and agrees with applicants statement that these claims, because of their dependency, should properly have been placed in group I. Therefore, these claims are no longer subject to restriction and are examined below.

Claim Objections

2. Claims 4 and 6 are objected to because of the following informalities: "1-50% hydrogen atom of said carboxyl group" is an awkward expression in claim 4, and in claim 6, the word 1-25mass% is a typographical error. Appropriate correction is required.

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Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. patent 4,748,194 to Geeck in view of Japanese patent 410265967 to Isaki and U.S. patent 5,234,974 to Calhoun et al.

With regard to claims 1 and 5, Geeck teaches applying a resin (including urethane, see col 2, line 53, as well as various types of epoxy, see col 4, lines 1+) to a gas tank of aluminum or steel (col 2, lines 30+) but does not *explicitly* require the gas tank to be aluminum coated steel, or that the resin be alkali soluble.

Isaki teaches a gas tank made of aluminum coated steel. Calhoun et al teach making an alkali soluble coating by using various acrylates in combination with an alkali soluble multivalent metal ion-containing bond forming agent. See col 2, lines 57+ and col 4, lines 63+.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the steel fuel tank of Geeck with a coat of aluminum, in light of the teachings of Isaki, and to have also applied a thin film which is solvent in an alkaline solution to the aluminum surface, in light of the teachings of Calhoun et al, in order to provide a coating material that can

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be dissolved in an alkaline solution following a forming operation, wherein the coating keeps the underlying material from being damaged.

With regard to claim 2, see col 6, lines 50+.

With regard to claim 3, the carboxyl groups described in col 4, lines 63+ of Calhoun would typically have acid values of 40-90 in order to be soluble in the pH range discussed in column 6.

With regard to claim 4, the alkali metal substitutions discussed in column 6 would typically have 1-50% of the hydrogen atom of the carboxyl group substituted by an alkali metal in order to be soluble in the pH range discussed.

With regard to claim 9, see col 4 lines 60+ of Calhoun et al.

With regard to claim 6, see col 3 and col 4 lines 65+ and note that silica is typically found in a powdery form.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being obvious over U.S. patent 4,748,194 to Geeck in view of Japanese patent 410265967 to Isaki and U.S. patent 5,234,974 to Calhoun et al as applied to claim 1, and further in view of U.S. patent 4,954,372 to Sako et al.

Geeck/Isaki/Calhoun et al teach the invention as described with respect to claim 1, but do not teach the coating layer to be .2 - 5 microns. A similar coating is taught in Sako et al that has these dimensions. See col 8 line 60. It would have been obvious to one of ordinary skill in the art at the time of the invention to have applied a coating with the dimensions noted above to

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Geeck/Isaki/Calhoun et al, in light of Sako et al, in order to have a coating of proper thickness so that it can be easily removed.


Contact Information

6. Official documents related to the instant application may be submitted to the Technology Center 3700 mail center by facsimile at (703) 872-9302 (responses before final) and 703-872-9303 (responses after final). Should Applicant desire to submit a DRAFT response to the Examiner by facsimile transmission, then Applicant should contact the Examiner at the number below for instructions concerning the transmission of DRAFT documents. Applicant is reminded to clearly mark any facsimile transmission as "DRAFT" if it is not to be considered as an official response. Examiner Blount may be contacted at the Patent Office between the hours of 9:00 am to 5:30 P.M. Monday through Friday.

7. Any inquiry concerning this communication should be directed to Examiner Steven Blount at telephone number (703) 305-0319.

SB

8/7/02


DAVID P. BRYANT
PRIMARY EXAMINER